

Salt Management Strategy (SaMS)

1st Water Quality Monitoring and Research Workgroup Meeting

November 8, 2018

The first Water Quality Monitoring and Research (WQMR) Workgroup meeting for the Salt Management Strategy (SaMS) was held from 1:00 pm – 3:30 pm on November 8, 2018 at Northern Virginia Regional Commission at 3040 Williams Drive, Fairfax, Virginia.

Attendance

Sixteen (16) individuals, including two DEQ staff members and one staff person from the Interstate Commission on the Potomac River Basin (ICPRB; DEQ's contractual support), participated in the meeting. Four of the participants joined the meeting via teleconference.

Emily Bialowas, Izaak Walton League
Joni Calmbacher, City of Alexandria
Peter Chata, City of Fairfax^{†i}
Mary Cortina, Fairfax Countyⁱ
Scott Crafton, Virginia Department of
Transportation (VDOT)[†]
Shannon Curtis, Fairfax County
Mike Fitz, Research Council^{†i}
Norm Goulet, Northern Virginia Regional
Commission (NVRC)

Will Isenberg, DEQ*
Louis Lowd, Research Council^{†i}
John Muse, Virginia Department of
Transportation (VDOT)
Niffy Saji, Fairfax Water
Erfaneh Sharifi, ICPRB*
Russ Short, Northern Virginia Trout Unlimited
Sarah Sivers, DEQ*
Carol Wong, Center for Watershed Protection

*Facilitator

[†]Participated via teleconference

ⁱGeneral Public (Non-Member of WQMR)

Meeting Highlights

At this meeting, members focused on articulating the scope of the workgroup recommendations, identifying the process to develop recommendations, and exploring the expected workgroup outcomes. The main take-aways from this meeting are:

- The workgroup supported the proposed scope. Specifically that the WQMR workgroup should provide recommendations for monitoring the impact of Best Management Practices (BMPs) implementation on water quality, identify reporting standards for data comparability, and over the long-term aim to better understand the origin, fate, and transport of salts.
- High priority topics for this workgroup are identifying currently available data, existing water quality data inventories, pilot programs, and parameters of interest for WQMR Workgroup.
- The workgroup recommendations should address different audiences, including government agencies, private monitoring groups, and volunteer organizations.

Notes for Other Workgroups / Potential Areas of Overlap:

- The workgroup members recommended coordinating with the Salt Tracking & Reporting workgroup for:
 - Updates on recommendations (e.g., metrics for salt use)
 - Where BMPs are being implemented, both as a metric and if a pilot project occurs.

- Identifying the size of the pilot program was discussed in WQMR Workgroup. This topic will be looked at by the Education and Outreach Workgroup. A homeowners survey is a good example of a pilot program of a defined size.

Follow-up Action Items:

Workgroup volunteers are pursuing five follow-up action items prior to the next meeting of the WQMR Workgroup:

1. Develop a draft conceptual model for fate and transport of salts and share the results with the workgroup (Volunteer: Russ Short, Northern Virginia Trout Unlimited)
2. Share Izaak Walton League's survey for monitoring groups' water quality monitoring programs (Volunteer: Emily Bialowas, Izaak Walton League)
3. Develop a survey, using Izaak Walton League's survey as a template, for ion related monitoring efforts, and coordinate edits with WQMR workgroup (Volunteer: DEQ)
4. Review available ion-focused water quality monitoring programs by sharing the survey with regional programs and document the results and share the results with the WQMR workgroup by mid-January.
 - a. Government agencies (Volunteer: Norm Goulet, Northern Virginia Regional Commission)
 - b. Citizen monitoring groups in Izaak Walton League's network (Volunteer: Emily Bialowas, Izaak Walton League)
 - c. Programs in the Interstate Commission for the Potomac River Basin's Database (Volunteer: ICPRB)
 - d. Other Partners in workgroup members' networks (Volunteers: WQMR workgroup members as appropriate and not duplicated by other efforts)
5. Prepare a shareable spreadsheet of monitoring programs contacted (Volunteer: DEQ)

Meeting Summary

Introductions

The meeting started with brief introductory and opening remarks from DEQ, which stated the goals for this first meeting as identifying the scope of the workgroup and identifying action items. The WQMR Workgroup's initial goal is to identify what to tackle first. Participants then introduced themselves and provided their expectations and interests in the WQMR workgroup. Some common themes included interest in existing water quality monitoring throughout the region, using science to support decision making, monitoring the impact of BMPs on water quality, and understanding the mechanics of salt in a watershed. A workgroup member asked about the time frame of the workgroup and DEQ answered that it is expected to finish developing recommendations for the SaMS in 2020, transitioning then into implementation of the recommendations.

Membership, Roles and Expectations

DEQ explained the roles and expectations of primary and alternate workgroup members. The roles, expectations, workgroup purpose, and meeting goals can be found on DEQ's [Salt Management Strategy Meeting Materials Webpage](#).

Workgroup Scope

DEQ presented the SaMS objectives that the WQMR Workgroup is proposed to address. These objectives include (objective #5) developing recommendations for a monitoring and research program to better understand water quality patterns and impacts related to salt application throughout Northern Virginia, and (objective #4) exploring funding opportunities, operational cost savings, and broader incentives to support implementation.

In outlining the scope, DEQ provided examples of topics to consider, including BMP effectiveness, ambient water quality monitoring, water quality data compatibility, and research areas such as different sources of salt (e.g. winter maintenance, and water softeners) and the impact of climate on water quality behaviors and patterns.

Feedback from workgroup members included:

- Rename “BMP effectiveness” as “the link between water quality and the implementation of best practices
- Consider variables affecting water quality (e.g. terrain and climate)
- Pool ambient monitoring resources and discuss the process of using the data
- Understand the existing water quality data and the locations where data has been collected
- Identify parameters to use from existing water quality data inventories, and strengthen the link and relationship with other partners to access the data
- Compare the water quality data and QA/QC procedures of monitoring and reporting
- Set a longer-term goal to study the fate and transport of salts
- Identify specific items/tasks that will require external funding
- Consider monitoring other important factors beyond water quality (e.g. soil and groundwater)
- Reach out to academic institutions about research, monitoring efforts, and funding
- Find the linkage between the water quality data, monitoring locations, salt use, and BMPs

Content Development

DEQ asked the workgroup members “what are the over-arching questions we intend to answer with our recommendations?” The discussion then focused on two primary questions:

- Are BMPs working?
- What is the origin, fate, and transport of salt through the region?

The workgroup agreed that to understand if BMPs are working, information on the weather (e.g., precipitation amount and type, temperature, etc.) would be necessary to understand changes in water quality where BMPs are implemented since weather is a large and complex variable. One workgroup member asked, if we are asking if BMPs are working, we must also identify what we consider success.

Questions aimed at understanding the origin, fate, and transport of salts were both acknowledged as a primary goal and a long-term goal. The workgroup agreed that conceptual models should be prepared in the near-term, and then tested over time. During the discussion of fate and transport, a workgroup member asked, “Why are we proposing a monitoring and research program?” In response, the workgroup outlined the need for scientifically informed decision making, in addition to better understanding the extent of the problem and to see if BMP recommendations and implementation are making a difference. Following this discussion, a workgroup member recommended identifying

intermediate measures and early indicators, acknowledging the scale and complexity of the questions the workgroup is proposing to answer.

The workgroup members agreed that the audiences that monitoring and research recommendations will be developed for includes public, private, and volunteer organizations. The SaMS recommendations should address different audiences since they function differently.

Pilot projects in specific watersheds were discussed. The Accotink Creek watershed was discussed as a pilot project candidate, with additional discussion on whether Accotink Creek should be considered as a whole study area or whether it should be divided into smaller sub-watersheds. A workgroup member pointed out that the size of the area is important for the monitoring program. If there are some existing monitoring efforts in the Accotink Creek watershed, additional information should be obtained about the monitoring effort like what parameters are being monitored, where and when monitoring is taking place, who is conducting the monitoring, and who is accountable for the data.

At this point in the discussion, the workgroup agreed that it is important to conduct research on the currently available data and ongoing monitoring efforts. Although the workgroup agreed on the bigger questions to ask with the monitoring and research recommendations (e.g., fate and transport, BMP impact on water quality), the workgroup agreed that knowing what data and monitoring programs already exist should inform workgroup recommendations. Therefore, the workgroup decided that the first step is to inventory the parameters that are currently monitored, data availability, the entities conducting the monitoring work, how those data are stored, and how they can be grouped together. A workgroup member offered to share a survey used by their organization in the past to inventory monitoring efforts. The workgroup agreed this survey can serve as the template for developing a survey for the purposes of the SaMS and distribute it to their networks prior to the next workgroup meeting.

Conceptual models related to origin, fate, and transport phenomena are important for developing monitoring and research recommendations related to salt origin, fate, and transport. A workgroup member volunteered to draft a model for the next meeting.

Approach to Completing Tasks

DEQ asked the participants about their thoughts on tasks to complete before the next meeting. The actions that the workgroup agreed to are summarized on page 2 of this summary in the section titled "Follow-up Action Items."

Meeting Wrap-up:

The next meeting of this workgroup is expected in February 2019.

Handouts from the meeting are available on the SaMS Meeting Materials [webpage](#).

All information, questions, additional resources, etc. should be emailed to Will Isenberg (william.isenberg@deq.virginia.gov) and Sarah Sivers (sarah.sivers@deq.virginia.gov). DEQ will consolidate information received and distribute it to workgroup members as needed.

Meeting notes were prepared and submitted to DEQ by the Interstate Commission on the Potomac River Basin.

Additional Feedback Contributed to the Follow Up Survey:

A survey was shared following the meeting to capture any additional thoughts workgroup members had following the meeting.

There were no responses.